Minority Stress and LGBQ College Students' Depression: Roles of Peer Group and Involvement

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Danielle Leigh Bissonette
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Abstract

In this study, we examined the relations between LGBQ microaggressions and internalized heterosexism and depression among 568 LGBQ college students who completed an online survey. We also considered the moderating/buffering roles of positive peer group relations and involvement in LGBQ campus activities in these links. Results showed that LGBQ microaggressions and internalized heterosexism were positively related to depression at the bivariate level. Hierarchical multiple regression analysis showed that positive peer group relations moderated the relation between internalized heterosexism and depression. Internalized heterosexism predicted depression for students with low levels of positive peer group relations, but not for those with moderate or high levels. We also found a conditional direct effect, where LGBTQ microaggressions predicted depression and this effect was stronger for those with high involvement in LGBQ campus activities. Our findings underscore the importance of attending to experiences of minority stress when working with LGBQ clients presenting with depression and helping them increase positive peer group relations and consider the potential costs and benefits involved in participating in LGBQ campus activities.

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Chapter 1: Introduction

In the United States, psychological disorders, such as depression and anxiety, account for almost 50% of the disease burden for young adults (World Health Organization, 2008). These disorders are widespread among college students (Hunt & Eisenberg, 2010). They are so prevalent that 39% of college students reported depressed feelings that interfered with their ability to function and 12% had serious thoughts of suicide within the last 12 months (American College Health Association, 2018). Using random samples from 26 colleges, Hunt and Eisenberg (2010) found that a significant proportion of students interviewed screened positive for depression (17%) and anxiety (10%) disorders. Relatedly, researchers at a large Southern university found that 83% of their students had at least mild depression, 16% reported a past suicide attempt or deliberate self-harm, and 11% endorsed current suicidal ideation (Garlow et al., 2008).

Mental disorders in college students seem to be growing in amount and severity. A 2008 study found that 93% of college counseling center directors reported a significant upsurge in severe mental health problems among their students (Gallagher, 2008). Since 2000, there has been a 10-15% increase in the number of college students reporting ever having been diagnosed with depression (American College Health Association, 2008). Among college students receiving university/college counseling center services, depression is the second most common presenting problem and it has increased in prevalence each year since 2013 (Center for Collegiate Mental Health, 2018). While depression and suicidality are a growing concern for college students in general, they are an even greater concern for lesbian, gay, bisexual, and queer (LGBQ) college students. Westefeld, Maples, Buford and Taylor (2001) found that LGBQ college students reported greater loneliness, depression, and fewer reasons for living than their

heterosexual counterparts. Furthermore, LGBQ youth experience higher levels of depression and suicidality than heterosexual youth (for a meta-analysis, see by Marshal et al., 2011). Students receiving therapy at university/college counseling centers for concerns related to gender identity and/or sexual orientation often require lengthier treatment (Center for Collegiate Mental Health, 2018).

Given the high rates of psychological distress and mental health disorders among college students in general, and LGBQ students in particular, it is important to examine both risk and protective factors in this population. Thus, the purpose of this study was to examine relations between LGBQ minority stressors and depression among LGBQ college students. In addition, it examined the moderating or buffering roles of positive peer group relations and involvement in LGBQ campus activities in the minority stressors → depression link.

LGBQ Minority Stressors and Depression

Meyer (2003) proposed minority stress theory as a way to understand why LGBQ people may experience more mental health issues than heterosexual people. Using his theoretical framework, differences in depression rates between LGBQ and heterosexual students may be due to minority stress that results from a hostile college social environment created by LGBQ stigma and discrimination. Minority stress can take on several forms (e.g., sexual identity concealment, expectations of rejection and discrimination), but experiences of sexual orientation-based prejudice and discrimination and internalized heterosexism seem to be most pernicious and have been consistently linked to depression when using general (non-college specific) LGBQ samples (Meyer, 1995; 2003; Szymanski, Kashubeck-West, & Meyer, 2008a; Szymanski & Ikizler, 2013). However, there is a dearth of research that focuses specifically on the experiences of LGBQ college students as they relate to mental health outcomes, including depression.

LGBQ minority stressors may be especially relevant for LGBQ college students because college is a particularly formative time for young adults (Woodford, Kulick, Sinco & Hong, 2014). There are many important tasks to be accomplished during this time including personal development, determining of career aspirations, and preparation for the workforce, which many students find stressful enough, but which could become overbearing when coupled with experiencing sexual orientation-based minority stressors on a regular basis (Pascarella & Terenzini, 2005). Furthermore, college is a critical time where many LGBQ students are exploring their sexual identity and learning to navigate the world in relation to it (e.g., coming out to self and others; Evans & Broido, 1999; Rhoads, 1995; Sanlo, 2004).

Today, prejudice and discrimination toward LGBQ people most often involve a more subtle heterosexism than the physical attacks of the past (Jewell & Morrison, 2010). Rankin, Weber, Blumenfeld and Frazer (2010) found that LGBQ college students were 17 times more likely to experience heterosexism in the form of derogatory remarks than in the form of physical violence. Jewell and Morrison (2010) had similar findings in that college students in their sample most often participated in subtle forms of discrimination, such as telling antigay jokes, and only 2% of the sample reported physically assaulting or damaging the property of a gay man. Thus, subtle instances of heterosexism, often in the form of microaggressions, seem to be more prevalent than overt violence.

Microaggressions are "the everyday verbal, nonverbal, and environmental slights, snubs, or insults, whether intentional or unintentional, that communicate hostile, derogatory, or negative messages to target persons based solely upon their marginalized group membership" (Sue, 2010, p. 3). While the term was originally coined to refer to subtle forms of racism (Pierce, Carew, Pierce-Gonzalez, & Wills, 1977), it has now been expanded to include discrimination against

sexual minorities (Balsam, Molina, Beadnell, Simoni, & Walters, 2011; Woodford, Chonody, Kulick, Brennan, & Renn, 2015; Wright & Wegner, 2012). LGBQ microaggressions on college campuses revolve around subtle forms of heterosexism including hearing comments like "that's so gay," being told to stop acting so LGBQ, and hearing messages that being LGBQ is wrong (Woodford et al., 2015).

Although often unintentional and seemingly harmless, LGBQ microaggressions may have negative effects on LGBQ people. In fact, microaggressions may be more harmful than direct harassment and discrimination. Woodford et al. (2014) found that microaggressions contributed more strongly to students' experiences of heterosexism than overt acts of hate. A burgeoning body of research has linked LGBQ microaggressions to poorer psychological outcomes including more perceived stress, anxiety, and depression among LGBQ college students (Kulick, Wernick, Woodford, & Renn, 2017; Woodford et al., 2014; Woodford, Kulick, & Atteberry, 2015).

Internalized heterosexism is "the internalization by lesbian, gay, and bisexual individuals of negative attitudes and assumptions about homosexuality that are prevalent in society" (Szymanski et al., 2008b, p. 510). Internalized heterosexism has been consistently linked to poorer mental health outcomes, including global psychological distress, depression, and anxiety (Newcomb & Mustanki, 2010; Szymanski et al., 2008a). In addition, Newcomb and Mustanki (2010) found that the relations between internalized heterosexism and depression were stronger than the relations between internalized heterosexism and anxiety in their meta-analytic study. Although many studies examining internalized heterosexism and psychological outcomes have included LGBQ college students in their samples, very few have focused solely on them (Szymanski et al., 2008a). Studies focusing on both external and internalized minority stressors

among LGBQ college students are important given the unique developmental phase of this particular group (Pascarella & Terenzini, 2005), the unique manifestations of LGBQ microaggressions on campus (Woodford et al., 2015), and research showing that age moderates the internalized heterosexism-distress links, with weaker links demonstrated using samples with a lower average age (Newcomb & Mustanki, 2010).

Peer Group Relations and Involvement as Moderators

In addition to the direct effects of external and internalized forms of heterosexism on mental health outcomes, minority stress theory also posits moderating effects of both individual and community social support and coping (e.g., social support systems, emotional regulation, resilience, involvement in the LGBQ community; Meyer, 2003). Moderators are variables that can intensify or buffer the minority stressors and poor mental health outcomes links (Frazier, Tix & Barron, 2004). In this study, we examined two potential moderators that may weaken the positive associations between LGBQ microaggressions and internalized heterosexism and depression: positive peer group interactions and involvement in LGBQ campus activities. Identifying protective factors relevant to specific relations can identify subgroups of LGBQ persons for whom this link may be more prominent and can facilitate intervention development.

Positive peer group relations. Developing close personal relationships with peers is an important developmental task of emerging adulthood and a key component of social and academic integration in the college environment (Pascarella & Terenzini, 1980). Researchers have found positive relations between peer attachment and academic performance and psychosocial competence (Fass & Tubman, 2002; Oberle & Schonert-Reichl, 2013), suggesting that friendships play a large role in students' well-being and overall college experience. This research suggests that strength of attachment may be important in navigating social transitions,

particularly during college years. Peer attachment might also aid LGBQ students in important transitions, such as coming out to friends and family. If LGBQ students have strong positive peer group relations, it may be less stressful for them to disclose their LGBQ identity and may serve as an important coping resource when faced with external and internalized minority stressors.

Positive peer groups relations in college can validate a person's sexual minority identity, socially integrate them into a community, minimize the threat appraisal of the stressor, provide feelings of security and self-efficacy, offer valuable emotional resources, and improve one's coping ability, which may buffer the effects of a negative social environment and minority stressors on poor mental health outcomes (Davidson & Demaray, 2007; Graham & Barnow, 2013; Sheets & Mohr, 2009; Szymanski, 2009). Peer support can be especially important for LGBQ youth because if rejected by their family, they come to rely on their peers for the support their family is not providing (Goldfried & Goldfried, 2001). Several studies have found that more social support is directly associated with less psychological distress (Sattler, Wagner, & Christiansen, 2016), lower levels of depression (Sheets & Mohr, 2009), and better adjustment to college and less career indecision (Schmidt, Miles, & Welsh, 2011) among LGBQ samples.

Some research suggests that positive interpersonal relationships may buffer the minority stress → negative mental health outcomes link. Davidson and Demaray (2007) found that social support from family, classmates, school, and teachers moderated the link between bullying victimization and internalizing distress such that as middle school students perceived more support, they reported less psychological distress from bullying. Further, Doty, Willoughby, Lindahl and Malik (2010) found that higher levels of sexuality-related support buffered the relations between sexuality stress and psychological distress among LGBQ youth. Support from romantic relationships has been found to buffer the relations between discrimination and both

anxiety and depressive disorders among bisexual individuals (Feinstein, Latack, Bhatia, Davila & Eaton, 2016) and negative life stressors and psychological distress among same-sex couples (Graham & Barnow, 2013). In contrast, two studies found no support for the moderating role of social support in the heterosexist discrimination and mental health outcomes among sexual minority men in the United States (Szymanski, 2009) and Germany (Sattler et al., 2016).

In terms of internalized minority stressors, Sattler et al. (2016) found that non-LGBQ social support buffered the internalized heterosexism and psychological distress link. Mereish and Poteat (2015) found that having a high quality interpersonal relationship with a close LGBQ or heterosexual friend was related to less psychological distress among LGBQ persons with low internalized heterosexism. They also found that having a high quality relationship with a close LGBQ (but not a heterosexual) friend was related to less psychological distress among LGBQ persons with high internalized heterosexism.

To make sense of some of the conflicting findings concerning the buffering role of social support in the stress-distress links, scholars have suggested that the existence of a moderating effect may rely, at least partially, on a match between the demands of stressor and type of support (Cohen & Wills, 1985; Doty et al., 2010; Graham & Barnow, 2013). Given the demands of college life and the unique manifestations and experiences of heterosexism on campus, peer-group relations in college seems like a particularly important variable to examine as a potential moderator in the minority stressors → depression link.

Involvement in LGBQ campus activities. While sexual minority status can come with stressors, it also provides an opportunity for group membership that can serve as a protective factor against minority stress (Meyer, 2003). Using qualitative research methods, Lee (2002) found that participation in a high school gay-straight alliance was related to more comfort with

and more positive feelings toward one's sexual minority identity, greater sexual orientation disclosure to others, and more willingness to challenge heterosexism. Westefeld et al. (2001) found that students viewed LGBQ-related college groups favorably and felt that they fostered friendships, provided support, validated sexual minority experiences, aided in the coming out process, improved members' self-concepts, and allowed members to help each other, which may buffer the negative effects of heterosexist microaggressions and internalized heterosexism on LGBQ college students' depression. In addition, involvement in LGBQ campus groups and activities can provide opportunities to engage in collective action aimed at decreasing heterosexism and affirming LGBQ identities and communities, which may foster empowerment, personal control, and self-efficacy (Kulick et al., 2017) and help reduce the negative effects of minority stressors on mental health.

Toomey, Ryan, Diaz and Russell (2011) found that at low levels of victimization, being a member of a high school gay-straight alliance buffered the relations between LGBQ school victimization and depression as well as the risk for suicide attempts, however, at high levels of victimization, there was no difference between gay-straight alliance members and nonmembers. Kulick et al. (2017) found that involvement in college campus leadership buffered the relations between microaggressions and depression among white LGBTQ college students, with weaker relations for those who were involved in campus leadership.

DeBlaere, Brewster, Bertsch, DeCarlo, Kegel and Presseau (2014) found that collective action surrounding sexual minority issues moderated the link between heterosexist events and psychological distress such that there was a positive relation between the two variables for sexual minority women of color with low levels of sexual minority collective action. Szymanski and Owens (2009) found that involvement in feminist activities buffered against the negative effects

of sexism on psychological distress for lesbian and bisexual women. In contrast, Kulick et al. (2017) found that involvement in LGBQ activism exacerbated the sexual orientation-based victimization and depression link among racial/ethnic LGBQ college students, with stronger relations for those who were involved in LGBQ activism on campus. We could find no research examining LGBQ involvement as a moderator in the relations between internalized heterosexism and mental health outcomes; however, researchers have found that membership in a LGBQ group is related to less internalized heterosexism among sexual minority women (Szymanski, Chung, & Balsam, 2001) and men (Ross & Rosser, 1996). These finding suggests that membership in LGBQ-related groups may buffer the relationship between internalized heterosexism and depression.

Current Study

We examined the relations between LGBQ microaggressions and internalized heterosexism and depression among LGBQ college students. We also considered the moderating roles of positive peer group relations and involvement in LGBQ campus activities in these links. We hypothesized that LGBQ microaggressions and internalized heterosexism would have positive links with depression. In addition, positive peer group relations and involvement in LGBQ campus activities would buffer the relations between LGBQ microaggressions and depression and internalized heterosexism and depression. More specifically, the relations between both LGBQ microaggressions and internalized heterosexism and depression would be weaker when positive peer group relations and involvement in LGBQ campus activities are high and stronger when positive peer group relations and involvement in LGBQ campus activities are low.

Chapter 2: Methods

Participants

Data for the current study were collected as part of a larger study that reported the development and initial validation of the LGBTQ College Campus Climate Scale (Szymanski & Bissonette, 2018). The only measure used in the current study that was also used in the scale development study was the depression measure. The larger study consisted of 646 participants. Because this study focused on LGBQ microaggressions, we deleted 70 participants who reported being asexual and eight heterosexuals. This resulted in a sample size of 568 for the current study.

Of the 568 participants in the final sample, 80% of the sample was assigned female at birth and 20% was assigned male at birth. In terms of gender identity, 58% identified as a woman, 17% identified as a man, 12% identified as genderqueer/gender non-conforming, 5% identified as a transman, 1% identified as a transwoman, and 8% identified as a different gender identity (e.g., agender, genderfluid, non-binary, questioning). Self-reported sexual orientation included lesbian or gay (38%) and some form of bisexuality (62%). Participants ranged in age from 18 to 56, with a mean age of 20.59 years (SD = 3.32). Sixty-nine percent of participants were White, 7% were Latino/a, 4% were African American/Black, 12% were Asian American/Pacific Islander, 7% were Biracial/Multiracial, and 1% other. All participants (n = 568) were currently enrolled in a college or university, with 25% being freshmen, 22% sophomores, 20% juniors, 20% seniors, 12% graduate students, and 2% other. United States geographical residency of participants included 24% Northeast, 37% Midwest, 27% South, and 11% West. Twenty-four percent of students were first generation college students while 76% were not the first in their family to go to college. Due to rounding, percentages may not add up to 100%.

Measures

LGBQ microaggressions. We assessed LGBQ microaggressions using the 20-item LGBQ Microaggressions on Campus Scale (LGBQMCS; Woodford et al., 2015), which measures interpersonal and environmental microaggressions. Sample items include "Someone told me they were praying for me because they knew or assumed I am lesbian, gay, bisexual, or queer" and "I received information about sexual health that was limited to heterosexual sex." Participants were instructed to respond to each item by reporting experiences that occurred on campus within the past year using a 5-point Likert- scale from 0 (*Never*) to 5 (*Very frequently*). We used mean scores, with higher scores representing more experiences of LGBQ microaggressions. Reported Cronbach's α was .94 for the interpersonal subscale and .81 for the environmental subscale. Structural validity of scores on the LGBQMCS was supported via both exploratory and confirmatory factor analyses. Validity of scores on the LGBQMCS was supported by (a) its positive correlation with sexual orientation-based victimization and negative correlation with social acceptance on campus, and (b) demonstrating that the LGBQMCS predicted depression symptoms and academic developmental challenges (Woodford et al., 2015). Alpha for the current sample was .94.

Internalized heterosexism. We assessed internalized heterosexism using the 5-item Internalized Homophobia Scale-Revised (Herek, Cogan, Gillis, & Glunt, 1998). Sample items include "I feel that being gay/lesbian/bisexual is a personal shortcoming for me" and "If someone offered me the chance to be completely heterosexual, I would accept the chance." Participants rated each item on a 5-point Likert-type scale from 1 (*Strongly disagree)* to 5 (*Strongly agree).* We used mean scores, with higher scores indicating greater internalized heterosexism. Reported Cronbach's α was .82. Construct validity was supported by negative

correlations with openness about one's sexual orientation, connection with and feelings toward the LGBQ community, and self-esteem and positive relations with perceived stigma related to one's sexual orientation and depression (Herek et al., 1998; Herek, Gillis & Cogan, 2009). Alpha for the current sample was .79.

Peer group relations. We assessed peer-group interactions in college using Pascarella and Terenzine's (1980) 7-item Peer Group Interactions subscale. Sample items include "Since coming to this university I have developed close personal relationships with other students" and "It has been difficult for me to meet and make friends with other students (reverse-scored)." Each item is rated on a 5-point Likert-type scale from 1 (*Strongly disagree*) to 5 (*Strongly agree*). We used mean scores, with higher scores representing greater positive peer group interactions. Cronbach's α (.84) and structural validity via exploratory factor analyses were demonstrated. Construct validity was supported by its ability to differentiate between students who dropped out and those who persisted in college (Pascarella & Terenzine, 1980). Alpha for the current sample was .85.

Involvement in LGBQ campus activities. We assessed LGBQ campus involvement using two items from Brown, Clarke, Gortmaker and Robinson-Keilig's (2004) campus climate survey. The two items were "How often did you visit the GLBTQ Center on campus in the past year?" and "In the past year, how often did you attend a campus related GLBTQ-event or program focused on GLBT topics?" Participants rated each item on a 5-point Likert-type scale from 0 (*Never)* to 4 (*4 or more times*). We used mean scores, with higher scores representing more involvement in LGBQ campus activities. Reported α was .79. Construct validity was supported by demonstrating that LGBQ students showed more involvement in LGBQ campus activities than did heterosexual students. Alpha for the current sample was .71.

Depression. We assessed depression with the 8–item Patient Health Questionnaire (PHQ-8; Kroenke, Strine, Spitzer, Williams, Berry, & Mokdad, 2009), which reflects DSM criteria for the diagnosis of depressive disorders. Sample items include "Feeling down, depressed, or hopeless" and "Feeling tired or having little energy." Participants responded to each item by indicating how often they experienced each symptom over the past two weeks. They responded to each item on a 4-point Likert- scale from 0 (*Not at all*) to 3 (*Nearly every day*). We used mean scores, with higher scores representing more depression. Reported α's were .86 and above (Kroenke, Spitzer, & Williams, 2001). Validity of scores on the PHQ-8 was supported by (a) similar findings of depression prevalence whether defined using a PHQ-8 score greater than or equal to 10 or DSM criteria, (b) health-related impairment almost identical in depressed participants as defined by either method, and (c) presence of a diagnosed depressive disorder in participants with a PHQ-8 score greater than or equal to 10 (Kroenke et al., 2009). Alpha for the current sample was .89.

Procedure

As described earlier (Szymanski & Bissonette, 2018), we recruited participants using the snowball method. More specifically, we sent research announcements via email to the contact person for a variety of university/college LGBTQ-related groups, listservs, and gender and sexuality-related courses. We asked this person to forward our research announcement to their listserv and/or to eligible students. Participants were directed to an online informed consent and survey when they clicked the hypertext link that we provided in the email research announcement. Depression was assessed first in the survey to reduce response bias and demographics last. All other measures were randomly ordered. Using a separate database,

participants were given the chance to enter a raffle drawing awarding four randomly chosen individuals a $50 online merchant gift card.

Chapter 3: Results

Patterns of missing data analysis for the 568 participants in our study revealed that 97.36% of participants had no missing data and no item had 1% or more of missing values. Tabachnick and Fidell (2013) suggest that most methods of handling missing data are appropriate when less than 5% of the data are missing; thus, we used available case analysis, a kind of conditional mean imputation where missing data are imputed from each participant's observed scores on the scale where missing values take place.

Absolute skewness (range = .17 - 1.07) and kurtosis (range = .03 - 1.30) indicated that each variable was sufficiently normal (i.e., skewness < 3, kurtosis < 10; Weston & Gore, 2006). We observed one multivariate outlier (Mahalanobis distance p <.001). The outlier showed no particular pattern of response (e.g., selecting "3" for all item level responses), and it did not have a significant bearing on the overall model (Cook's distance < 1; Field, 2013). Therefore, the outlier was retained as no reason to remove it was evident.

Cronbach's α, descriptive statistics, and inter-correlations among all variables assessed in this study are shown in Table 1. At the bivariate level, LGBQ microaggressions and internalized heterosexism were positively related to depression (r = .34, r = .13), respectively. We also examined correlations between the demographic variables of age, birth sex (female vs male), sexual orientation (gay/lesbian vs bisexual), and college generational status (1st generation vs not) and our study variables. Sexual orientation was the only demographic variable related to any of our variables. It was positively related to depression (r = .12; p = .006) indicating that being bisexual was associated with more depression. Thus, we included sexual orientation as a control variable in the regression analysis.

We conducted a hierarchical multiple regression analysis to test the moderator hypotheses. Before conducting the analyses, scores for LGBQ microaggressions, internalized heterosexism, peer group relations, and involvement in LGBQ campus activities were centered. Multicollinearity indexes for the analyses showed that multicollinearity did not present an issue (i.e., variance inflation factors < 10; Field, 2013).

The demographic variable, sexual orientation, was entered in Step 1. Main effects (i.e., LGBQ microaggressions, internalized heterosexism, peer group relations, and involvement in LGBQ campus activities) were entered in Step 2. Interaction effects (i.e. the interactions between LGBQ microaggressions and peer group relations, LGBQ microaggressions and involvement in LGBQ campus activities, internalized heterosexism and peer group relations, and internalized heterosexism and involvement in LGBQ campus activities) were entered in Step 3. The regression model was significant, $R^2 = .21$, F (9, 558) = 16.70, $p < .001$. Sexual orientation, LGBQ microaggressions, peer group relations, the interaction between LGBQ microaggressions and involvement in LGBQ campus activities, the interaction between internalized heterosexism and peer group relations, and the interaction between internalized heterosexism and involvement in LGBQ campus activities significantly and uniquely predicted depression (see Table 2).

Hayes (2013) SPSS PROCESS macro (Model 1) was used to interpret the significant moderation effects. Results showed that involvement in LGBQ campus activities ($\Delta R^2 = .01$, significant $\Delta F = 4.86$, $p = .03$) moderated the relation between LGBQ microaggressions and depression. LGBQ microaggressions predicted depression for students with low (-1 *SD*; $B = .15$, $t = 3.76$, $p = .000$, 95% CI [.072, .230]), at the mean ($B = .21$, $t = 7.49$, $p = .000$, 95% CI [.158, .271]), and high (+1 *SD*; $B = .28$, $t = 6.79$, $p = .000$, 95% CI [.197, .358]) levels of involvement

in LGBQ campus activities (see Figure 1). Contrary to our hypothesis, this effect was stronger for those with high involvement in LGBTQ campus activities.

Results also showed that peer group relations (ΔR^2 = .01, significant ΔF = 4.30, p = .04) moderated the relation between internalized heterosexism and depression. Internalized heterosexism predicted depression for students with low (-1 *SD*; *B* = .11, *t* = 2.01, *p* = .04, 95% CI [.003, .208]) levels of peer group relations, but not for those at the mean (*B* = .02, *t* = .56, *p* = .61, 95% CI [-.058, .099]) or high (+1 *SD; B* = -.06; *t* = -1.04, *p* = .30, 95% CI [-.186, .057]) levels (see Figure 2).

Finally, results showed that involvement in LGBQ campus activities (ΔR^2 = .01, significant ΔF = 4.10, p = .04) moderated the relationship between internalized heterosexism and depression. However, follow-up simple slopes analysis revealed that internalized heterosexism did not significantly predict depression for students with low (*SD* = -1; *B* = .10, *t* = 1.87, *p* =.06), at the mean (*B* = .02, *t* = .51, *p* =.61), nor high (*SD* = +1; *B* = -.06, *t* =-1.03, *p* =.30), levels of involvement in LGBQ campus activities. Thus, we did not plot the interaction.

Chapter 4: Discussion

Minority stress theory (Meyer, 2003) provides a useful framework for understanding the high rates of depression among LGBQ college students. Consistent with this theory and prior research (Woodford et al., 2014; Szymanski et al., 2008a), we found that LGBQ microaggressions and internalized heterosexism were positively related to depression. These findings suggest that everyday, subtle forms of external heterosexism in the college environment and the adoption of negative messages about homosexuality and bisexuality are risk factors for LGBQ college students' mental health.

We found mixed support for minority stress theory's tenet that individual and community social support can buffer the negative effects of external and internalized minority stressors on mental health outcomes (Meyer, 2003). Contrary to minority stress theory and our hypotheses, positive peer group relations did not moderate the LGBQ microaggressions → depression link. These results suggest that among LGBQ college students, LGBQ microaggressions are positively related to depressive symptoms regardless of whether or not they have formed close personal relationships with other students. These findings are consistent with Sattler et al. (2016) and Szymanski (2009) who found no support for the moderating role of social support in heterosexist discrimination → poor mental health outcomes link among gay and bisexual men.

Consistent with minority stress theory and our hypotheses, positive peer group relations was a protective factor in the internalized heterosexism → depression link. We found that internalized heterosexism predicted depression for students with low levels of positive peer group relations, but not for those with moderate or high levels of positive peer group relations. These findings are consistent with previous research indicating a buffering role of social support in the internalized heterosexism and psychological distress links (Mereish & Poteat, 2015; Sattler

et al., 2016). These findings suggest that peer relationships function as an important support system for LGBQ students. These peers can provide LGBQ students with a supportive community and a group of friends to be a part of. They may also validate the student's LGBQ identity by accepting them as they are. Having this support system may help LGBQ students cope more effectively in the face of internalized sexual orientation-based oppression.

Contrary to minority stress theory and our hypotheses, our results suggest that in the face of LGBQ microaggressions, students with high involvement in LGBQ campus activities are most at risk for depression. This finding is not consistent with previous research demonstrating a buffering role of membership in a gay-straight alliance (Toomey et al., 2011) and involvement in campus leadership (Kulick et al, 2017) in the link between external sexual orientation-based minority stressors and depression, but is consistent with Kulick et al.'s (2017) finding that involvement in LGBQ activism exacerbated the sexual orientation-based victimization and depression link among racial/ethnic LGBQ college students. Our findings may be due to increased exposure to discrimination that comes with being involved in these activities. More people will be able to identify the student as a member of a sexual minority group, thus putting the student at increased risk for harassment. It may also be that involvement in LGBQ campus activities increases exposure to and stress from macro-level sexual orientation-based oppression and vicarious exposure to heterosexism experienced by peers in these groups. Although high involvement in LGBQ campus activities may provide opportunities for validation and support for one's experiences of heterosexism and bisexism, it can be easy to get stuck in ineffective ruminating about one's experiences of oppression. Those who are highly involved in LGBQ campus activities may also be expending a lot of emotional and physical energy into these activities, which may take a psychological toll (Kulick et al., 2017).

Finally, our results showed a trend toward the buffering role of involvement in LGBQ campus activities in the relation between internalized heterosexism and depression. However, the follow-up simple slopes analyses were not significant and we did not make any further interpretation concerning these findings. Interactions with small effect sizes are typical in social science research (Chaplin, 1991) and our sample size may not have been powerful enough to detect it. Future research using a larger sample size is warranted.

Limitations and Directions for Future Research

It is important to discuss some limitations of our study. Self-selection bias may have had an effect on our findings. There may be important differences between LGBQ students who chose to participate in our study and those who did not. For instance, those who chose to participate were likely more secure in their LGBQ identity than those who did not. Our study was also based entirely on self-reported measures, which means response bias could have influenced our findings. Because our research design was correlational and cross-sectional, we cannot make causal inferences or conclusions about directionality. Further, limited racial diversity was present in our sample. The majority of our participants were white, which may limit generalizability of the findings to LGBQ students of color.

Future research might explore additional moderators to help identify other protective factors in the minority stressors-depression links. For example, future studies could examine how romantic relationships affect the minority stress-depression link. It could be that LGBQ college students who are partnered experience less negative mental health outcomes when experiencing sexual orientation-based minority stressors because their identity is affirmed by their partner and their partner provides support in the face of discrimination. Research might tease out the relations between involvement in LGBQ college-related activities that involve some type of

activism versus those that do not to determine if there are differential effects on the minority stressors-mental health outcomes links. Another moderator to explore is involvement in college activities in general, rather than LGBQ specific groups. Research by Kulick and colleagues (2017) suggests that involvement in campus leadership activities buffered the link between LGBQ microaggressions and depression, so future research might examine how other activities, such as sports teams, the arts, and Greek life affect that link. Additionally, having LGBQ role models could serve as a protective factor for LGBQ students. Having examples of people who share a sexual minority identity and are successful, happy, and resilient, may help students persevere in the face of LGBQ microaggressions and internalized heterosexism.

Further research should also examine the minority stress-depression link from an intersectional lens. For example, it would be beneficial to examine if positive peer group relations and involvement in LGBQ and racial/ethnic minority campus activities moderate the relations between LGBQ people of color microaggressions, internalized racism, internalized heterosexism and depression among racial/ethnic minority LGBQ college students. It may also be important to explore the role outness plays in the minority stress-depression link among LGBQ college students. It may be that those who publicly identify as a sexual minority experience poorer mental health outcomes because more people are aware of their identity and thus, they are targeted more often. On the contrary, it may be that those who are out are more secure in their identity and this confidence may buffer the minority stress-depression link for those individuals.

Practical Implications

Our findings suggest some strategies for clinicians working with LGBQ college students. First, clinicians working with depressed LGBQ college students might determine if LGBQ

microaggressions and internalized heterosexism are influencing their symptomatology and if so, they should include these minority stressors in their case conceptualizations and treatment plans. Clinicians might validate feelings associated with these stressful experiences, refrain from minimizing them, recognize the importance they hold for LGBQ individuals, link these experiences and attitudes to their depressive symptoms, and challenge maladaptive internalized heterosexist and bisexist beliefs.

Our findings suggest that increasing positive peer group relations could increase LGBQ students' resilience in the face of internalized heterosexism. Clinicians could provide encouragement, support, and social skills training to help LGBQ clients, particularly those with high internalized heterosexism, develop social connections and establish a support system. Our findings also suggest that in the face of LGBQ microaggressions, students with high involvement in LGBQ campus activities are most at risk for depression. As such, clinicians might help LGBQ students explore both the pros and cons of involvement in LGBQ campus activities. Additionally, psychological interventions could be developed and targeted toward LGBQ students who are highly involved in LGBQ campus activities and experiencing microaggressions regularly as they are the students most at risk for depression.

Clinicians and university faculty, administrators, and staff can advocate for LGBQ students by raising awareness about the harmful effects of heterosexism and bisexism on campus and working to abolish heterosexist and bisexist college norms and policies. Clinicians can engage in outreach activities targeted toward supporting LGBQ students and reducing heterosexism/bisexism on campus. This could include initiating events such as mental health presentations for pre-existing LGBQ clubs, organizing support groups for LGBQ students,

assisting in Pride Week, and sponsoring documentary screenings and community conversations about LGBQ minority stressors.

Chapter 5: Conclusion

Our findings suggests that heterosexism and its internalization present risks to LGBQ college students' mental health. Additionally, our results identify the exacerbating role of involvement in LGBQ campus activities in the LGBQ microaggressions → depression link. They also suggest that having positive peer group relations could serve as a protective factor from the negative mental health outcomes that are associated with internalized heterosexism. Thus, we might encourage LGBQ students to develop supportive relationships with their peers and we might work with them to understand the consequences, both positive and negative, of public involvement in activities related to sexual minority identity.

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Appendix

Table 1 *Means, Standard Deviations, and Correlations for Study Variables*

Variables	Possible Range	*M*	*SD*	1	2	3	4
1. LGBQ Microaggressions	0-5	1.57	1.09	---			
2. Internalized Heterosexism	1-5	1.80	.78	.21*	---		
3. Peer Group Relations	1-5	3.69	.79	-.15*	-.11*	---	
4. Involvement in LGBQ Campus Activities	0-4	1.95	1.39	.09*	-.12*	.13*	---
5. Depression	0-3	1.27	.78	.34*	.13*	-.28*	.04

* $p < .05$.

Table 2 *Summary of Hierarchical Regression Predicting Depression*

Step	Variables	*B*	*β*	*t*	R^2	ΔR^2	ΔF	*df*
1	Sexual Orientation	.20	.12	3.23*	.01	.01	7.66*	1,566
2	LGBQ Microaggressions	.21	.30	7.49*	.19	.18	31.03*	4,562
	Internalized Heterosexism	.02	.02	.51				
	Peer Group Relations	-.25	-.25	-6.42*				
	Involvement in LGBQ Campus Activities	.03	.04	1.14				
3	LGBQ Microaggressions x Peer Group Relations	.00	.00	-.09	.21	.02	3.61*	4,558
	LGBQ Microaggressions x Involvement in LGBQ Campus Activities	.05	.09	2.20*				
	Internalized Heterosexism x Peer Group Relations	-.11	-.09	-2.07*				
	Internalized Heterosexism x Involvement in LGBQ Campus Activities	-.06	-.08	-2.02*				

Note. *B, β,* and *t* reflects values from the final regression equation; *p <.05. Sexual orientation was coded as 1= gay/lesbian, 2= bisexual.

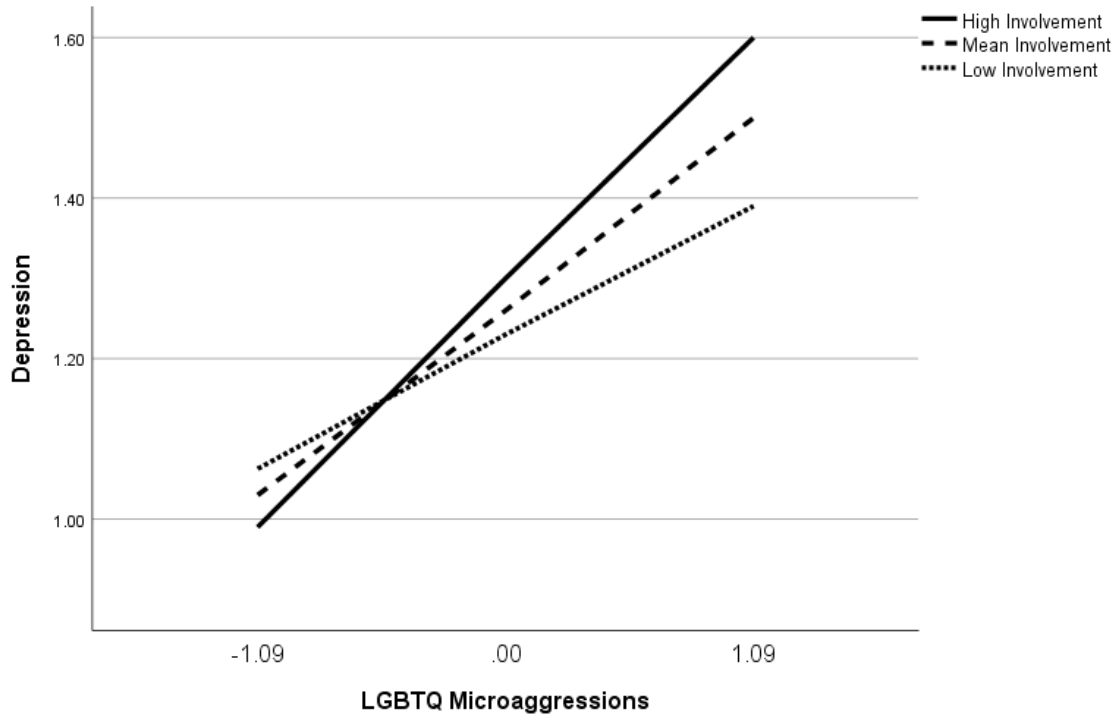


Figure 1. Involvement in LGBQ campus activities as a moderator.

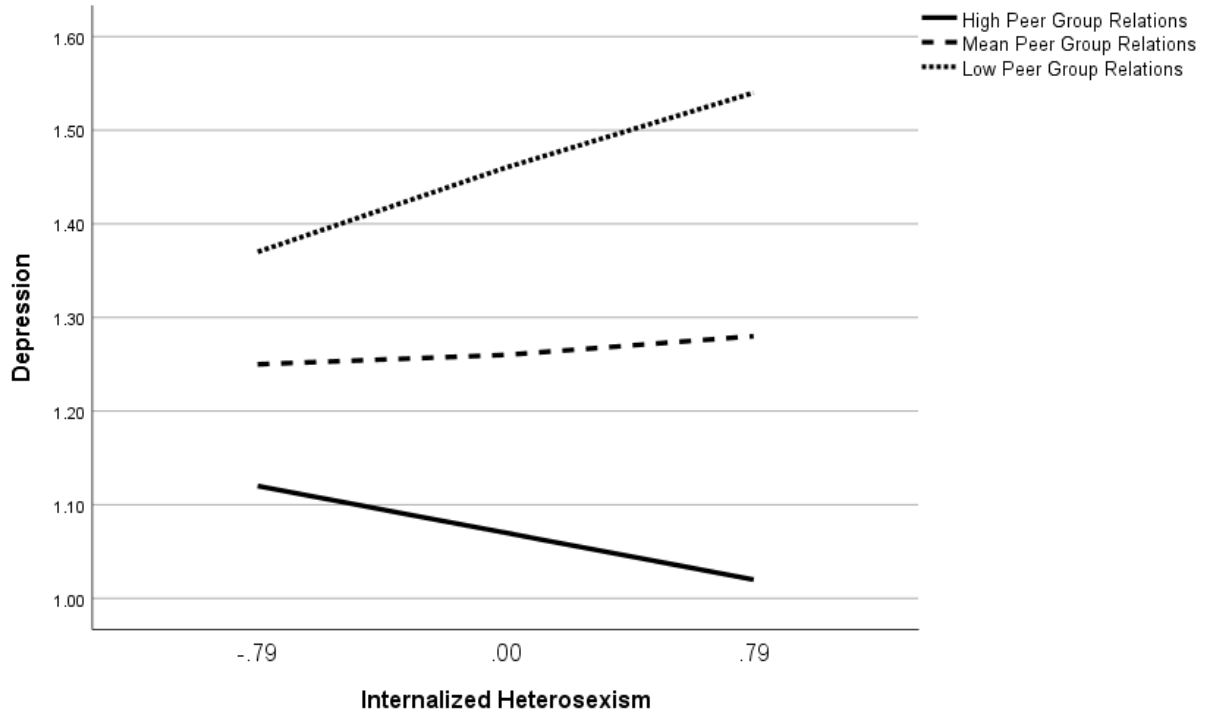


Figure 2. Peer group relations as a moderator.

Vita

Danielle Bissonette was born in New Milford, CT. She attended Immaculate High School in Danbury, CT and then went on to Villanova University in Villanova, PA. She graduated magna cum laude and earned her Bachelor of Arts degree in psychology with minors in peace and justice and counseling in May 2017. She is now continuing her education in the counseling psychology doctoral program at the University of Tennessee, Knoxville under the mentorship of Dr. Dawn Szymanski.